

Remarks:

Applicant has read and considered the Office Action dated July 30, 2008 and the references cited therein. Claims 1, 4 and 6-8 have been amended. Claims 1-10 are currently pending. Reconsideration is hereby requested.

In the Action, the prior art references were indicated as being considered. Applicant thanks the Examiner for consideration of the Information Disclosure Statement and the references submitted therewith.

The Action stated that claim 1 included improper bullet points. The bullet points have been deleted. In addition in claim 4, there was a typographical error. A space has been added to correct the error. Finally, with regard to claim 4 and 8, each step or element has been indented as suggested. Applicant asserts that the objections to the claims have been overcome.

Claims 1, 2, 4, 5, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Sonu et al. The Office Action indicates that Sonu discloses an adaptive equalizer comprising an equalizer filter for filtering a distorted signal from a communication channel, having a data signal input for receiving the distorted signal, a feedback control signal that generates an output signal and an output node. The Action also states that Sonu discloses circuitry for processing the output signal and generating the feedback control signal. The circuitry comprises a first means for measuring a short term amplitude signal of the output signal and second means for measuring a long term amplitude signal of the output signal.

Finally, the Action contends that Sonu discloses a comparator means that compares a short term amplitude signal and a long term amplitude signal that determines the evolution of the feedback control signal arranged such that the distorted signal is compensated for its higher frequency attenuation in the communication channel.

Applicant respectfully traverses the rejection. Claim 1 has now been amended and recites that the adaptive equalizer comprises an equalizer filter having an input for an analog feedback control signal. The analog feedback control signal is important to avoid clipping of the signal on a node at the output after the equalizer. To achieve this advantage, it can be appreciated that the signal should be maintained in its analog form.

Sonu fails to disclose an analog feedback control signal. Conversely, Sonu shows a system with a digital feedback signal and teaches away from using an analog signal. Sonu is directed to accomplishing different objectives and neither teaches nor suggests the possibility of using the analog signal as now recited in claim 1. Moreover, Applicant asserts that Sonu fails to teach or suggest comparative means for determining during actual data transmission in real time operation the evolution of an analog feedback control signal. Sonu teaches a system wherein the required compensation is determined in a training sequence prior to actual data transmission as discussed at column 3, lines 31-35. The Sonu reference therefore fails to teach or suggest evolution of an analog feedback control signal in any manner. Applicant asserts that claim 1 as submitted, patentably distinguishes over Sonu or any other prior art or combination thereof.

Similarly, claim 8 recites a method wherein the output signal provides an analog feedback signal and the analog feedback signal is provided to compensate for high frequency attenuation in the distorted signal. Sonu fails to teach or suggest use of such an analog signal and teaches away from the method of claim 8 of the present application while using only digital signals. Applicant therefore asserts that claim 8 patentably distinguishes over Sonu for the reasons discussed above.

Moreover, Applicant asserts that claims 1 and 8 are nonobvious in view of Sonu et al. or any other prior art. Sonu teaches away from the present invention as Sonu uses a training sequence for determining the amount of compensation required. This is not a viable option that

can be utilized for line equalizers as recited in the claims of the present application and discussed on page 1, lines 10-11. Retraining is often required with the prior art system of Sonu, seriously adversely affecting the overall efficiency. Compensation is typically used by multiplying by a D/A converter to add a variable amount of compensation. Such a device is large, expensive and is not suitable for real time operation.

It can be seen that the system and method of the present invention as recited in the claims of the present application provide for a simple solution that allows for a permanent update of line equalizers during actual data transmission without the need for training the sequences. Rather than using a digital storage, the present system uses a capacitor for holding an analog feedback control signal. As Sonu teaches away from the present system and method, Applicant asserts that claims 1 and 8 are new and novel over Sonu and any other prior art or combination thereof. Applicant requests that the rejections with regard to claims 1 and 8 be withdrawn as well as the claims depending therefrom.

Claims 3 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sonu et al. in view of Koch et al. Applicant asserts that claims 1 and 8 patentably distinguish over Sonu et al as discussed above. Applicant asserts that Koch fails to overcome the deficiencies of Sonu et al. Therefore, Applicant asserts that claims 1 and 8 also patentably distinguish over the combination of Sonu and Koch et al. Claims 3 and 10 are also believed to be allowable over the combination for at least the same reasons as well as others. Applicant requests that the rejection of claims 3 and 10 therefore be withdrawn.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sonu et al. in view of Gyi. Applicant asserts that claim 1 patentably distinguishes over Sonu as discussed above and that Gyi fails to overcome the deficiencies of Sonu et al. Therefore, Applicant asserts that claim 1 patentably distinguishes over the combination of Sonu and Gyi and that claim 6 is

also allowable for at least the same as well as other reasons. Applicant therefore requests that the rejection of claim 6 be withdrawn.

Finally, claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sonu et al. in view of Doyle. Applicant asserts that claim 1 patentably distinguishes over Sonu et al. as discussed above and that Doyle fails to overcome the deficiencies of Sonu et al. Applicant therefore asserts that claim 1 patentably distinguishes over the combination of Sonu and Doyle. Claim 7 depends from claim 1 and is therefore believed to be allowable over the combination of Sonu and Doyle for at least the same reasons as well as others. Applicant therefore requests that the rejection of claim 7 under 35 U.S.C. § 103(a) be withdrawn.

A speedy and favorable action in the form of a Notice of Allowance is hereby solicited. If the Examiner feels that a telephone interview may be helpful in this matter, please contact Applicant's representative at (612) 336-4728.

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725.



Respectfully submitted,

MERCHANT & GOULD P.C.

Dated: _____

12/30/08

By: _____

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